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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.                             | CONFIRMATION NO.                          |
|---|-------------|----------------------|---|---|
| 10/796,047  | 03/10/2004  | Takemi Hasegawa      | 50212-575                                       | 2723                                      |
| <div>7590 05/08/2007</div> <div>McDermott, Will &amp; Emery<br/>600 13th Street, N.W.<br/>Washington, DC 20005-3096</div> |             |                      |   |   |
|   |             |                      | <div>EXAMINER</div> <div>HOFFMANN, JOHN M</div> |   |
|   |             |                      | <div>ART UNIT</div> <div>1731</div>             | <div>PAPER NUMBER</div>                   |
|   |             |                      | <div>MAIL DATE</div> <div>05/08/2007</div>      | <div>DELIVERY MODE</div> <div>PAPER</div> |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                               |                                 |  |
|------------------------------|-------------------------------|---------------------------------|--|
| <b>Office Action Summary</b> | Application No.<br>10/796,047 | Applicant(s)<br>HASEGAWA ET AL. |  |
|                              | Examiner<br>John Hoffmann     | Art Unit<br>1731                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2007.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-24 is/are pending in the application.
- 4a) Of the above claim(s) 22-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

Applicant's election of Group I, Specie A in the reply filed on 3/30/07 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

Claims 22-24 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 3/30/07.

Applicant asserts that claim 24 is directed to the invention of Group 1; no explanation is given therefor. The plain reading of claim 24 is that it is devoid of any fiber making steps. Although it refers to the process of claim 11, it is in a manner similar to product-by-process claims. That process is only used to describe the type of fiber required, not the actual steps of fiber making.

The courts have been holding for quite some time that “—in spite of the fact that a product-by-process claim may recite only process limitations, it is the product which is covered by the claim and not the recited process steps.” (In re Hughes, 182 USPQ). Also, “—patentability of a claim to a product does not rest merely on a difference in the method by which that product is made. Rather, it is the product itself which must be new and unobvious.” (In re Pilkington, 162 USPQ 147).

### ***Information Disclosure Statement***

The IDS filed on 20 Sept 2005 has two references lined through – because they were elsewhere/previously considered/initialed.

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the appliances of claim 15 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered. From page 44, lines 20-25 and elsewhere, only a single appliance is shown in the drawings.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

Art Unit: 1731

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 11-21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As indicated in **MPEP 2173.05(p) II:**

A single claim which claims both an apparatus and the method steps of using the apparatus is indefinite under 35 U.S.C. 112, second paragraph. In *Ex parte Lyell*, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990), a claim directed to an automatic transmission workstand and the method steps of using it was held to be ambiguous and properly rejected under 35 U.S.C. 112, second paragraph. Such claims should also be rejected under 35 U.S.C. 101 based on the theory that the claim is directed to neither a "process" nor a "machine," but rather embraces or overlaps two different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only. *Id.* at 1551.

Claim 11 requires both apparatus and method steps, for example Claim 11 has a drawing step which comprises structure – the three "means". This is more clearly seen at claim 12 and other dependent claims which indicates that the means comprises steps. Since the claim is directed to neither a process nor a machine, applicant cannot obtain a patent therefore.

Similarly, the following 112 rejection is made:

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As pointed out above, the claims are hybrid claims and are therefore indefinite as to what they require.

**\*\* WRITTEN DESCRIPTION \*\* NECESSARY TO SUPPORT A CLAIM**

**LIMITATION WHICH INVOKES 35 U.S.C. 112, SIXTH PARAGRAPH**

>35 U.S.C. 112, sixth paragraph states that a claim limitation expressed in means-plus-function language "shall be construed to cover the corresponding structure...described in the specification and equivalents thereof." "If one employs means plus function language in a claim, one must set forth in the specification an adequate disclosure showing what is meant by that language. If an applicant fails to set forth an adequate disclosure, the applicant has in effect failed to particularly point out and distinctly claim the invention as required by the second paragraph of section 112." In re Donaldson Co., 16 F.3d 1189, 1195, 29 USPQ2d 1845, 1850 (Fed. Cir. 1994) (in banc).

The proper test for meeting the definiteness requirement is that the corresponding structure (or material or acts) of a means (or step)-plus-function limitation must be disclosed in the specification itself in a way that one skilled in the art will understand what structure (or material or acts) will perform the recited function. See Atmel Corp. v. Information Storage Devices, Inc., 198 F.3d 1374, 1381, 53 USPQ2d 1225, 1230 (Fed. Cir. 1999).

The claims invoke 35 USC 112 – 6<sup>th</sup> paragraph. But there is no adequate disclosure as to what is meant by the language. Examiner could find no examples and

Art Unit: 1731

no description of the means. Most importantly, there is no indication as to how the means can comprise (sub-)steps as required by dependent claims.

The claims are replete with numerous other problems that make a reasonable search impossible. For example in claim 11: there is no antecedent basis for “the preform” (line 4); it is unclear if “its axis” refers to the axis of the void(s) or the preform; there is no antecedent basis for “the area fraction”. The claims refer to measuring; but the disclosure indicates that the values aren’t actually measured, rather, the values are calculated; it is unclear whether one can copy applicant’s invention and avoid infringement merely by calculating the values rather than measuring them. Line 8 of claim 11 – it is unclear if “voids” refer back to the voids of line 4 – or if they can be other voids – or even a subset of those voids. It is unclear if the voids of claim 14 are the same voids of claim 11.

Some claims refer to main mediums and sub mediums. But the specific examples have only one main medium and one sub medium. A claim interpretation that puts the preferred embodiment outside the claim is “rarely, if ever, correct and would require a highly persuasive evidentiary support”, Vitronics, at 1583. It is unclear whether one should interpret the claimed “mediums” to be directed to encompass (or even limited to) the embodiments which have only single medium.

There is confusing antecedent basis for “adjusting means” in claim 11 – it is unclear it is the same thing as the means for adjusting.

Claim 14 – it is unclear if this refers to the same preform and axis.

Claim 15: there is no antecedent basis for “the glass softening point”.

Art Unit: 1731

Claim 16: there is no antecedent basis for "the heating condition".

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

<sup>11-14 + 16-20</sup>  
Claims ~~11-21~~ are rejected under 35 U.S.C. 102(e) as being anticipated by

Fajardo 6444133.

As to the preparing step: it is clear from figure 2 and the associated text that a preform with uniform voids is created. As to the drawing step: see the last sentence of the Abstract – it is disclosed elsewhere in the specification also. Means to measure is deemed to be disclosed at least by feature 110 of figure 1. Means to adjust pressure: see col. 6, lines 30-35. As to the means to feedback: such clearly invokes 35 USC 112 6<sup>th</sup> paragraph – it clearly meets the three-prong test for such. However there is no mention of what that structure is. It is deemed that it includes human/manual feedback it is clear that one could use human feedback in the Fajardo process. It is noted that the this is not saying that such feedback is disclosed or obvious – rather that the claim



Art Unit: 1731

merely requires that the means be present (i.e. "included" last word of claim 11). It is deemed inherent that the artisan is present.

Alternatively, for the "means to adjust": this means relates to "the measured area fraction". But there claims do not require a step of measuring an area fraction. Thus the broadest reasonable interpretation is that "if there is a measured area fraction, then the means is for feedback...." Since Fajardo does not meet the conditional "if", the result is not required.

Claims 12-13: Fajardo's structure/means has substeps to the same degree that applicant's structure has steps.

Claim 14: the term "boring" is not defined by applicant. Tradition definitions include using a rotating bit/drill. The present specification also includes an description where the glass can be heated so as to reduce the viscosity – this indicates that the term "boring" is not limited to the more traditional meanings. It is deemed that the term "boring" includes any method which creates a bore or a hole – included in softened glass. It is deemed that it is inherent that Fajardo created the holes/bores in the glass – when the glass is either soft or rigid.

The claim requires "making a preform in a single piece". There is no disclosure as to what the piece is. The specification defines "sub mediums" to include vacuum. It is deemed that if a medium can be a vacuum, then a "piece" can also be a vacuum or nothingness or a gas. It is deemed that the Fajardo preform is made in air: air is a piece. Alternatively, it is deemed that "in" a piece can be interpreted as "into" a piece. Fajardo makes the multipiece preform "in(to) a single piece" by combining tubes. The

Art Unit: 1731

etching creates the bores – that is it creates new bores – since they are of a larger size with a completely new interface, they are newly created bores. The etching also serves to clean. The drawing step inherently prevents/excludes contaminants that are larger than the holes in the fiber.

Claims 16-20 are met in as much as the present disclosure teaches the claimed invention.

***Claim Rejections - 35 USC § 103***

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 15 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fajardo 6444133 as applied to claims 14 and 20 above, and further in view of Onishi 6474108.

Fajardo does not disclose the insertion of appliances. Onishi (figure 11c) discloses that one can drill holes in the manner claimed and that such creates a uniform hole (col. 7, lines 22-34) with precision. It would have been obvious to use the Onishi hole-creation method to create the Onishi holes for the precision that the Onishi process creates. It would have been obvious to use multiple drills/appliances to make the holes, depending upon how quickly the tubes are needed. It is noted that the term "preform" as presently used appears to encompass a multi-component preform. It is also noted that the claims do not require each of the steps be performed in the stated order.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. DiGiovanni, Broeng and Russell are cited as being cumulative to Fajardo.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Hoffmann whose telephone number is (571) 272 1191. The examiner can normally be reached on Monday through Friday, 7:00- 3:30.

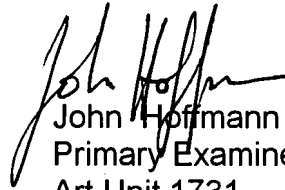
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steve Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/796,047

Page 12

Art Unit: 1731

  
John Hoffmann  
Primary Examiner  
Art Unit 1731

5-4-07

jmh